



## MEMORANDUM

**To:** Environment and Natural Resources Working Committee

**From:** CMAP Staff

**Date:** July 7, 2016

**Re:** Alternative Futures Scenario Planning: Approach and Scope of Work

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Scenario planning is a tool used by many metropolitan planning organizations (MPOs) to help regional stakeholders determine preferred planning approaches, understand trends for the region, and assess different land use, economic, and transportation policies. For ON TO 2050 development, CMAP will undertake an “alternative futures” scenario planning process that will assess trends in the region and strategies to plan for the potential future impacts of these trends. The scenario planning process will culminate in an intensive public engagement period to be held over the summer of 2017, which will ultimately inform the direction of the ON TO 2050 plan. This memo summarizes the vision-driven scenario planning approach conducted for GO TO 2040, presents the proposed alternative futures approach for ON TO 2050, and outlines a schedule for scenario planning work in the next fiscal year.

### Scenario Planning in GO TO 2040

The [GO TO 2040 Regional Vision](#) laid out a desired future for the region that included a high quality of life, protected and enhanced natural environment, social systems that foster a healthy and safe populace, a strong regional economy, a multi-modal transportation system, and a coordinated governance structure. During the development of GO TO 2040, CMAP used a vision-driven approach to scenario planning to build consensus around strategies to help the region achieve its goals. Three scenarios, each representing a suite of actions, policies, and investment priorities, were presented to the public for feedback during Invent the Future, a public outreach campaign that took place in the summer of 2009. The three scenarios included: reinvest, where infrastructure would be rebuilt in existing communities to support growth and development; preserve, where the character of communities would remain largely intact; and innovate, where new technology and innovations would drive quality of life improvements. Based on public input and evaluation of potential outcomes from each set of strategies, CMAP combined the most positive aspects of the three scenarios to develop a [preferred scenario](#); this preferred scenario laid the groundwork for the final policy recommendations of GO TO 2040.

Two memos, released in [June 2008](#) and [June 2009](#), provide an overview of the vision-driven process, which allowed CMAP to test the impact of different transportation, land use, and other planning strategies in concert with one another. This approach, which is commonly used at other MPOs and regional planning organizations, ultimately fostered regional consensus on the value of integrating land use and transportation and led to a more complete understanding of the effects and tradeoffs of policies.

Per direction from the CMAP Board as well as substantial partner feedback, ON TO 2050 will build on the policies and recommendations of GO TO 2040 by refining existing recommendations and considering new policy areas that are complementary to CMAP's role. Similarly, CMAP will pursue a scenario planning approach for ON TO 2050 that complements previous work rather than repeat it.

## **Alternative Futures in ON TO 2050**

Economic, social, environmental, and technological forces can profoundly, and sometimes rapidly, affect regional goals, such as improved livability, mobility, and economic growth. Since GO TO 2040, the Chicago region has experienced a mix of positive outcomes, along with some near-term negative economic trends and worsening climate change impacts. An alternative futures approach can help the region achieve GO TO 2040 goals in the context of broader macro-level changes that are beyond the control or sphere of influence of CMAP or its partners.

For comparison, CMAP's prior scenario planning approach identified policies and strategies that changed future land use, transportation, and economic outcomes to varying degrees, and selected the combination of strategies that best met all regional goals. In contrast, an alternative futures approach addresses larger shifts by identifying the policy and strategy changes that could best help to capitalize on opportunities, mitigate or prepare for negative impacts, and address "known unknowns" relating to these macro level changes. ON TO 2050 will prioritize strategies that have benefits across multiple alternative futures. The alternative futures approach will, through both its outputs and public-facing tools, provide a vehicle to promote discussion with the public and stakeholders about land use, economic, and transportation policies and the tradeoffs inherent in different decisions.

In the alternative futures development process, CMAP will convene committee members, regional experts, and thought leaders to identify a set of trends and the potential futures or scenarios that may emerge from those trends. Each scenario will be oriented around one key trend and will consider a variety of related policy interventions and implications. It is anticipated that the alternative futures approach will include between five and eight distinct scenarios.

Trends that will be considered are ones that the nation and/or the region are already observing or experiencing, and are likely to have a more prominent impact in the future. These trends will reflect various topics in CMAP's purview, such as land use, transportation, environment, and the economy. Some topics that may be considered include increased adoption of transportation



innovations (e.g., ridesharing, automated vehicles, etc.), decreased federal funding, a larger senior population, and more intense or frequent flooding and other impacts of climate change. The scenarios should also be distinct and broad enough to cover the range of planning issues to be addressed in ON TO 2050.

Development of the alternative futures approach will be an iterative process. CMAP staff will evaluate potential trends primarily through qualitative research, including interviews with experts and literature review. When possible and most useful, staff will conduct quantitative and spatial analysis (e.g., modeling of transportation outcomes based on assumptions of varying socioeconomic trends and commuting habits). The scenario planning process will need to be carefully developed to focus on trends and impacts that can reasonably occur within the plan timeframe. The analysis will also be used to determine which factors are most relevant to CMAP's work and are very likely to have a large impact on land use, transportation, economic development, environmental quality, and equity in the region. Staff will regularly consult with working committee members on the development of the approach.

## Examples of Alternative Futures Scenario Planning

Alternative futures planning has long been common in the private sector, and MPOs around the country have also begun to employ this method in long-range comprehensive planning processes. The following case studies are examples of MPOs that have used alternative futures approaches in their planning processes.

### ***Future Forces, Delaware Valley Regional Planning Commission (DVRPC)***

DVRPC completed its most recent long-range regional plan, *Connections 2040*, in 2013, and is currently working on producing *Connections 2045*, a plan update. The first step toward completing the plan update is [Future Forces](#), the region's scenario planning effort. Drawing on a team of interdisciplinary experts, DVRPC brainstormed a list of emerging trends ("forces") with the potential to affect the Greater Philadelphia region over the plan horizon, then narrowed the list based on a force's likelihood of happening and its potential impact on the region. They selected five "structuring forces", which are trends that had both a high likelihood of occurring as well as a high potential for impact on the region, for further evaluation: booming domestic energy production, more severe climate impacts, increasing demand for housing in walkable urban centers, expanding transportation on-demand options, and the expansion of the free agent economy. They also identified ongoing trends in the region that were likely to continue but were predicted to have a less dramatic impact on the region's future, including an aging population, flat or declining levels of transportation funding, and political gridlock.

After analyzing the effects these forces could have on the Philadelphia region in the future and identifying policies that would better position the region to respond to them, DVRPC identified a list of "universal actions" that have a positive effect in response to all of the potential forces (see Table 1 below). They also highlighted "contingent actions" specific to each force that will need to be weighed and prioritized as part of the larger planning process.



**Table 1. Sample of Universal and Contingent Actions from the Greater Philadelphia Future Forces Process**

Sample Universal Actions
<ul style="list-style-type: none"> <li>• Update zoning codes to allow for mixed-use infill development.</li> <li>• Build lifelong communities that facilitate aging in place.</li> <li>• Encourage immigrant-friendly policies.</li> <li>• Use green infrastructure and stream buffer ordinances to improve water quality and livability.</li> <li>• Promote megaregional collaboration and cooperation.</li> <li>• Create regional or local big data team(s) to centralize and analyze datasets, guide decision making, and enhance government actions.</li> <li>• Create a modern multimodal transportation system and a regional funding source to help pay for it.</li> <li>• Enhance freight and goods movement.</li> <li>• Carry out Vision Zero plans, which set a goal of no roadway fatalities.</li> <li>• Improve infrastructure resiliency.</li> </ul>
Contingent Actions: “Enduring Urbanism” Structuring Force
<p><i>Force description: Millennials and empty nesters moving back to walkable urban centers are the start of a long-term trend, as future generations show an even stronger desire for city living and walking, biking, and transit.</i></p> <ul style="list-style-type: none"> <li>• (Re)develop without displacing existing households, allow for more multi-family housing.</li> <li>• Thoroughly implement Complete Streets to accommodate all users, including goods movement, along with protected bike lanes, pedestrian-only areas, and shared space/living streets concepts that prioritize bike and pedestrian use, particularly in the region’s centers.</li> <li>• Expand and increase service frequency throughout the transit system.</li> <li>• Retrofit office parks and commercial districts into dense mixed-use communities, update design guidelines with form-based zoning, and relax parking requirements.</li> <li>• Protect industrial zones.</li> </ul>

Source: Greater Philadelphia Future Forces, Delaware Valley Regional Planning Commission, 2016

**Metro Vision 2040, Denver Regional Council of Governments (DRCOG)**

DRCOG has used scenario planning in the development and subsequent updates of its long-range plan, Metro Vision. A major goal of [Metro Vision 2040](#), the most recent plan update the MPO is currently undergoing, is to provide more concrete, actionable recommendations. For this process, DRCOG directed a Metro Vision Planning Advisory Committee, a group made up of technical staff and experts representing a range of topics, to shepherd the scenario planning



process in consultation with a Transportation Advisory Committee. With the help of these committees, DRCOG identified five emerging trends that will likely impact the Denver region in the future: an aging population; changing housing preferences for millennials; increases in housing and transportation costs; public health impacts of the built environment; and environmental concerns such as fossil fuel availability, greenhouse gas emissions, and urban agriculture.

In selecting these trends for scenario planning, DRCOG evaluated the likelihood and magnitude of the effect of these different trends on the region and examined the durability, effect, and feasibility of various strategies in response to these trends, with an emphasis on which strategies would work well across multiple potential future scenarios. DRCOG also assessed any associated challenges, such as lack of available data, the intensity of resources needed to analyze data, and the technical reliability of data and analysis.

## Proposed Timeline

May – August 2016

### **Define the topics for the alternative futures process**

CMAP will conduct research and solicit committee feedback to identify the key trends that should be analyzed for an alternative futures approach, and assess the feasibility and analytical needs for each trend.

August 2016

### **Select key alternative futures for analysis**

CMAP will hold a forum with subject matter experts in the region to explore the topics to include in the scenario planning process as well as the likelihood and potential impact of each future. Staff will then finalize the set of alternative futures to be developed and discuss the selection with working committees.

September 2016 –  
March 2017

### **Develop alternative futures and prepare for public outreach**

CMAP staff will conduct in-depth research and analysis of the selected topics. Committees will review topical memos as analysis is produced. As relevant, the committees may also be involved in development of the topic-specific scenarios.

April – May 2017

### **Finalize outreach plan and materials**

June – August 2017

### **Public workshops on alternative futures**

